

520-sequences.ST25
SEQUENCE LISTING

<110> ZGene AS

Ekström, Tomas

Almqvist, Per

Asklund, Thomas

<120> Compounds for enhanced cancer therapy

<130> 520-204-wo

<150> DK PA 2004 00302

<151> 2004-02-25

<150> US 60/547,058

<151> 2004-02-25

<160> 17

<170> PatentIn version 3.1

<210> 1

<211> 376

<212> PRT

<213> herpes simplex virus 7

<400> 1

Met	Ala	Ser	Tyr	Pro	Gly	His	Gln	His	Ala	Ser	Ala	Phe	Asp	Gln	Ala
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Ala	Arg	Ser	Arg	Gly	His	Ser	Asn	Arg	Arg	Thr	Ala	Leu	Arg	Pro	Arg
			20					25					30		

Arg	Gln	Gln	Glu	Ala	Thr	Glu	Val	Arg	Pro	Glu	Gln	Lys	Met	Pro	Thr

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35

40

45

Leu Leu Arg Val Tyr Ile Asp Gly Pro His Gly Met Gly Lys Thr Thr
50 55 60

Thr Thr Gln Leu Leu Val Ala Leu Gly Ser Arg Asp Asp Ile Val Tyr
65 70 75 80

Val Pro Glu Pro Met Thr Tyr Trp Arg Val Leu Gly Ala Ser Glu Thr
85 90 95

Ile Ala Asn Ile Tyr Thr Thr Gln His Arg Leu Asp Gln Gly Glu Ile
100 105 110

Ser Ala Gly Asp Ala Ala Val Val Met Thr Ser Ala Gln Ile Thr Met
115 120 125

Gly Met Pro Tyr Ala Val Thr Asp Ala Val Leu Ala Pro His Ile Gly
130 135 140

Gly Glu Ala Gly Ser Ser His Ala Pro Pro Pro Ala Leu Thr Leu Ile
145 150 155 160

Phe Asp Arg His Pro Ile Ala Ala Leu Leu Cys Tyr Pro Ala Ala Arg
165 170 175

Tyr Leu Met Gly Ser Met Thr Pro Gln Ala Val Leu Ala Phe Val Ala
180 185 190

Leu Ile Pro Pro Thr Leu Pro Gly Thr Asn Ile Val Leu Gly Ala Leu
195 200 205

Pro Glu Asp Arg His Ile Asp Arg Leu Ala Lys Arg Gln Arg Pro Gly
210 215 220

Glu Arg Leu Asp Leu Ala Met Leu Ala Ala Ile Arg Arg Val Tyr Gly
225 230 235 240

Leu Leu Ala Asn Thr Val Arg Tyr Leu Gln Cys Gly Gly Ser Trp Arg
245 250 255

Glu Asp Trp Gly Gln Leu Ser Gly Thr Ala Val Pro Pro Gln Gly Ala
260 265 270

Glu Pro Gln Ser Asn Ala Gly Pro Arg Pro His Ile Gly Asp Thr Leu
275 280 285

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Phe Thr Leu Phe Arg Ala Pro Glu Leu Leu Ala Pro Asn Gly Asp Leu
290 295 300

Tyr Asn Val Phe Ala Trp Ala Leu Asp Val Leu Ala Lys Arg Leu Arg
305 310 315 320

Ser Met His Val Phe Ile Leu Asp Tyr Asp Gln Ser Pro Ala Gly Cys
325 330 335

Arg Asp Ala Leu Leu Gln Leu Thr Ser Gly Met Val Gln Thr His Val
340 345 350

Thr Thr Pro Gly Ser Ile Pro Thr Ile Cys Asp Leu Ala Arg Thr Phe
355 360 365

Ala Arg Glu Met Gly Glu Ala Asn
370 375

<210> 2

<211> 250

<212> PRT

<213> Drosophila melanogaster

<400> 2

Met Ala Glu Ala Ala Ser Cys Ala Arg Lys Gly Thr Lys Tyr Ala Glu
1 5 10 15

Gly Thr Gln Pro Phe Thr Val Leu Ile Glu Gly Asn Ile Gly Ser Gly
20 25 30

Lys Thr Thr Tyr Leu Asn His Phe Glu Lys Tyr Lys Asn Asp Ile Cys
35 40 45

Leu Leu Thr Glu Pro Val Glu Lys Trp Arg Asn Val Asn Gly Val Asn
50 55 60

Leu Leu Glu Leu Met Tyr Lys Asp Pro Lys Lys Trp Ala Met Pro Phe
65 70 75 80

Gln Ser Tyr Val Thr Leu Thr Met Leu Gln Ser His Thr Ala Pro Thr
85 90 95

Asn Lys Lys Leu Lys Ile Met Glu Arg Ser Ile Phe Ser Ala Arg Tyr
100 105 110

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Cys Phe Val Glu Asn Met Arg Arg Asn Gly Ser Leu Glu Gln Gly Met
115 120 125

Tyr Asn Thr Leu Glu Glu Trp Tyr Lys Phe Ile Glu Glu Ser Ile His
130 135 140

Val Gln Ala Asp Leu Ile Ile Tyr Leu Arg Thr Ser Pro Glu Val Ala
145 150 155 160

Tyr Glu Arg Ile Arg Gln Arg Ala Arg Ser Glu Glu Ser Cys Val Pro
165 170 175

Leu Lys Tyr Leu Gln Glu Leu His Glu Leu His Glu Asp Trp Leu Ile
180 185 190

His Gln Arg Arg Pro Gln Ser Cys Lys Val Leu Val Leu Asp Ala Asp
195 200 205

Leu Asn Leu Glu Asn Ile Gly Thr Glu Tyr Gln Arg Ser Glu Ser Ser
210 215 220

Ile Phe Asp Ala Ile Ser Ser Asn Gln Gln Pro Ser Pro Val Leu Val
225 230 235 240

Ser Pro Ser Lys Arg Gln Arg Val Ala Arg
245 250

<210> 3

<211> 234

<212> PRT

<213> Lycopersicon esculentum

<400> 3

Met Ala Phe Ser Ser Ser Ala Arg Asn Pro Val Asp Leu Arg Asn Gly
1 5 10 15

Ser Lys Asn Ser Phe Cys Pro Val Gly Glu Ile His Val Ile Val Gly
20 25 30

Pro Met Phe Ala Gly Lys Thr Thr Ala Leu Leu Arg Arg Val Asn Leu
35 40 45

Glu Ser Asn Asp Gly Arg Asn Val Val Leu Ile Lys Ser Ser Lys Asp
50 55 60

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Ala Arg Tyr Ala Val Asp Ala Val Val Thr His Asp Gly Thr Arg Phe
65 70 75 80

Pro Cys Trp Ser Leu Pro Asp Leu Ser Ser Phe Lys Gln Arg Phe Gly
85 90 95

Lys Asp Ala Tyr Glu Lys Val Asp Val Ile Gly Ile Asp Glu Ala Gln
100 105 110

Phe Phe Gly Asp Leu Tyr Glu Phe Cys Cys Asn Ala Ala Asp Phe Asp
115 120 125

Gly Lys Ile Ile Val Val Ala Gly Leu Asp Gly Asp Tyr Leu Arg Lys
130 135 140

Ser Phe Gly Ser Val Leu Asp Ile Ile Pro Leu Ala Asp Thr Val Thr
145 150 155 160

Lys Leu Thr Ala Arg Cys Glu Leu Cys Asn Arg Arg Ala Phe Phe Thr
165 170 175

Phe Arg Lys Thr Asn Glu Thr Glu Thr Glu Leu Ile Gly Gly Ala Asp
180 185 190

Ile Tyr Met Pro Val Cys Arg Gln His Tyr Val Asn Gly Gln Ser Val
195 200 205

Asn Glu Ser Ala Lys Met Val Leu Glu Ser His Lys Val Ser Asn Glu
210 215 220

Leu Ile Leu Glu Ser Pro Leu Val Asp Pro
225 230

<210> 4

<211> 361

<212> PRT

<213> Arabidopsis thaliana

<400> 4

Met Val Asp Tyr Leu Arg Ser Ser Val Gly Ile Ile His Arg Asn His
1 5 10 15

Ala Glu Ser Ile Thr Thr Phe Ile Lys Glu Ser Val Asp Asp Glu Leu
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20 25 30

Lys Asp Ser Gly Pro Glu Pro Asn Leu Asn Val Lys Lys Arg Leu Thr
35 40 45

Phe Cys Val Glu Gly Asn Ile Ser Val Gly Lys Ser Thr Phe Leu Gln
50 55 60

Arg Ile Ala Asn Glu Thr Val Glu Leu Gln Asp Leu Val Glu Ile Val
65 70 75 80

Pro Glu Pro Val Asp Lys Trp Gln Asp Val Gly Pro Asp His Phe Asn
85 90 95

Ile Leu Asp Ala Phe Tyr Ser Glu Pro Gln Arg Tyr Ala Tyr Thr Phe
100 105 110

Gln Asn Tyr Val Phe Val Thr Arg Leu Met Gln Glu Lys Glu Ser Ala
115 120 125

Ser Gly Val Lys Pro Leu Arg Leu Met Glu Arg Ser Val Phe Ser Asp
130 135 140

Arg Met Val Phe Val Arg Ala Val His Glu Ala Lys Trp Met Asn Glu
145 150 155 160

Met Glu Ile Ser Ile Tyr Asp Ser Trp Phe Asp Pro Val Val Ser Ser
165 170 175

Leu Pro Gly Leu Val Pro Asp Gly Phe Ile Tyr Leu Arg Ala Ser Pro
180 185 190

Asp Thr Cys His Lys Arg Met Met Leu Arg Lys Arg Ala Glu Glu Gly
195 200 205

Gly Val Ser Leu Lys Tyr Leu Gln Asp Leu His Glu Lys His Glu Ser
210 215 220

Trp Leu Leu Pro Phe Glu Ser Gly Asn His Gly Val Leu Ser Val Ser
225 230 235 240

Arg Pro Ser Leu His Met Asp Asn Ser Leu His Pro Asp Ile Lys Asp
245 250 255

Arg Val Phe Tyr Leu Glu Gly Asn His Met His Ser Ser Ile Gln Lys
260 265 270

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Val Pro Ala Leu Val Leu Asp Cys Glu Pro Asn Ile Asp Phe Ser Arg
275 280 285

Asp Ile Glu Ala Lys Thr Gln Tyr Ala Arg Gln Val Ala Glu Phe Phe
290 295 300

Glu Phe Val Lys Lys Lys Gln Glu Thr Ser Thr Glu Lys Ser Asn Ser
305 310 315 320

Gln Ser Pro Val Leu Leu Pro His Gln Asn Gly Gly Leu Trp Met Gly
325 330 335

Pro Ala Gly Asn His Val Pro Gly Leu Asp Leu Pro Pro Leu Asp Leu
340 345 350

Lys Ser Leu Leu Thr Arg Pro Ser Ala
355 360

<210> 5

<211> 250

<212> PRT

<213> Drosophila melanogaster

<400> 5

Met Ala Glu Ala Ala Ser Cys Ala Arg Lys Gly Thr Lys Tyr Ala Glu
1 5 10 15

Gly Thr Gln Pro Phe Thr Val Leu Ile Glu Gly Asn Ile Gly Ser Gly
20 25 30

Lys Thr Thr Tyr Leu Asn His Phe Glu Lys Tyr Lys Asn Asp Ile Cys
35 40 45

Leu Leu Thr Glu Pro Val Glu Lys Trp Arg Asn Val Asn Gly Val Asn
50 55 60

Leu Leu Glu Leu Met Tyr Lys Asp Pro Lys Lys Trp Ala Met Pro Phe
65 70 75 80

Gln Ser Tyr Ala Thr Leu Thr Met Leu Gln Ser His Thr Ala Pro Thr
85 90 95

Asn Lys Lys Leu Lys Ile Met Glu Arg Ser Ile Phe Ser Ala Arg Tyr
100 105 110

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Cys Phe Val Glu Asn Met Arg Arg Asn Gly Ser Leu Glu Gln Gly Met
115 120 125

Tyr Asn Thr Leu Glu Glu Trp Tyr Lys Phe Ile Glu Glu Ser Ile His
130 135 140

Val Gln Ala Asp Leu Ile Ile Tyr Leu Arg Thr Ser Pro Glu Val Ala
145 150 155 160

Tyr Glu Arg Ile Arg Gln Arg Ala Arg Ser Glu Glu Ser Cys Val Pro
165 170 175

Leu Lys Tyr Leu Gln Glu Leu His Glu Leu His Glu Asp Trp Leu Ile
180 185 190

His Gln Arg Arg Pro Gln Ser Cys Lys Val Leu Val Leu Asp Ala Asp
195 200 205

Leu Asp Leu Glu Asn Ile Gly Thr Glu Tyr Gln Arg Ser Glu Ser Ser
210 215 220

Ile Phe Asp Ala Ile Ser Ser Asn Gln Gln Pro Ser Pro Val Pro Val
225 230 235 240

Ser Pro Ser Lys Arg Gln Arg Val Ala Arg
245 250

<210> 6

<211> 580

<212> PRT

<213> Arabidopsis thaliana

<400> 6

Met Gln Lys Ile Leu Cys Lys Ser Thr Thr Ser Ser Thr Pro Val Leu
1 5 10 15

Ser Thr Pro Val Asn Ser Leu Ala Ala Gly Phe Ile Ser Leu Gly Phe
20 25 30

Lys Thr Pro Val Lys Asn Leu Pro Pro Cys Ser Thr Thr Lys Pro Leu
35 40 45

Ser Thr Cys Phe Phe Ser Thr Ser Ala Met Pro Thr Thr Thr Ala Ser
50 55 60

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Val Ser Ser Gly Gly Val Gly Phe Ser Ala Tyr Leu Gln Arg Thr Val
65 70 75 80

His Lys Pro Ala Pro Ala Ser Val Arg Phe Ser Thr Ala Gly Tyr Arg
85 90 95

Thr Cys Arg Cys Ser Ile Asp Gly Thr Asn Arg Ala Trp Val Gly Arg
100 105 110

Thr Gly Ser Trp Arg Ala Leu Phe Cys Ser Asp Ser Thr Gly Gly Leu
115 120 125

Thr Pro Val Asn Ala Thr Ala Gly Ala Val Val Glu Ser Glu Glu Glu
130 135 140

Ser Asp Gly Glu Asp Glu Asp Glu Glu Lys Asp Glu Lys Pro Val Arg
145 150 155 160

Met Asn Arg Arg Asn Arg Ser Ser Ser Gly Ser Gly Glu Phe Val Gly
165 170 175

Asn Pro Asp Leu Leu Lys Ile Pro Gly Val Gly Leu Arg Asn Gln Arg
180 185 190

Lys Leu Val Asp Asn Gly Ile Gly Asp Val Ala Glu Leu Lys Lys Leu
195 200 205

Tyr Lys Asp Lys Phe Trp Lys Ala Ser Gln Lys Met Val Asp Tyr Leu
210 215 220

Arg Ser Ser Val Gly Ile Ile His Arg Asn His Ala Glu Ser Ile Thr
225 230 235 240

Thr Phe Ile Lys Glu Ser Val Asp Asp Glu Leu Lys Asp Ser Gly Pro
245 250 255

Glu Pro Asn Leu Asn Val Lys Lys Arg Leu Thr Phe Cys Val Glu Gly
260 265 270

Asn Ile Ser Val Gly Lys Ser Thr Phe Leu Gln Arg Ile Ala Asn Glu
275 280 285

Thr Val Glu Leu Gln Asp Leu Val Glu Ile Val Pro Glu Pro Val Asp
290 295 300

Lys Trp Gln Asp Val Gly Pro Asp His Phe Asn Ile Leu Asp Ala Phe

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305				310				315				320			
Tyr	Ser	Glu	Pro	Gln 325	Arg	Tyr	Ala	Tyr	Thr 330	Phe	Gln	Asn	Tyr	Val 335	Phe
Val	Thr	Arg	Leu 340	Met	Gln	Glu	Lys	Glu 345	Ser	Ala	Ser	Gly	Val 350	Lys	Pro
Leu	Arg	Leu 355	Met	Glu	Arg	Ser	Val 360	Phe	Ser	Asp	Arg	Met 365	Val	Phe	Val
Arg	Ala 370	Val	His	Glu	Ala	Lys 375	Trp	Met	Asn	Glu	Met 380	Glu	Ile	Ser	Ile
Tyr 385	Asp	Ser	Trp	Phe	Asp 390	Pro	Val	Val	Ser	Ser 395	Leu	Pro	Gly	Leu	Val 400
Pro	Asp	Gly	Phe	Ile 405	Tyr	Leu	Arg	Ala	Ser 410	Pro	Asp	Thr	Cys	His 415	Lys
Arg	Met	Met	Leu 420	Arg	Lys	Arg	Ala	Glu 425	Glu	Gly	Gly	Val	Ser 430	Leu	Lys
Tyr	Leu	Gln 435	Asp	Leu	His	Glu	Lys 440	His	Glu	Ser	Trp	Leu 445	Leu	Pro	Phe
Glu	Ser 450	Gly	Asn	His	Gly	Val 455	Leu	Ser	Val	Ser	Arg 460	Pro	Ser	Leu	His
Met 465	Asp	Asn	Ser	Leu	His 470	Pro	Asp	Ile	Lys	Asp 475	Arg	Val	Phe	Tyr	Leu 480
Glu	Gly	Asn	His	Met 485	His	Ser	Ser	Ile	Gln 490	Lys	Val	Pro	Ala	Leu 495	Val
Leu	Asp	Cys	Glu 500	Pro	Asn	Ile	Asp	Phe 505	Ser	Arg	Asp	Ile	Glu 510	Ala	Lys
Thr	Gln	Tyr 515	Ala	Arg	Gln	Val	Ala 520	Glu	Phe	Phe	Glu	Phe 525	Val	Lys	Lys
Lys	Gln 530	Glu	Thr	Ser	Thr	Glu 535	Lys	Ser	Asn	Ser	Gln 540	Ser	Pro	Val	Leu
Leu 545	Pro	His	Gln	Asn	Gly 550	Gly	Leu	Trp	Met	Gly 555	Pro	Ala	Gly	Asn	His 560

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Val Pro Gly Leu Asp Leu Pro Pro Leu Asp Leu Lys Ser Leu Leu Thr
565 570 575

Arg Pro Ser Ala
580

<210> 7

<211> 300

<212> PRT

<213> Oryza sativa

<400> 7

Met Val Glu Phe Leu Gln Ser Ser Val Gly Ile Ile His Lys Asn His
1 5 10 15

Ala Glu Ser Ile Thr Leu Phe Ile Lys Glu Ser Val Asp Glu Glu Leu
20 25 30

Lys Gly Thr Asp Ser Pro Asn Val Ser Lys Asn Lys Arg Leu Thr Phe
35 40 45

Cys Val Glu Gly Asn Ile Ser Val Gly Lys Thr Thr Phe Leu Gln Arg
50 55 60

Ile Ala Asn Glu Thr Ile Glu Leu Arg Asp Leu Val Glu Ile Val Pro
65 70 75 80

Glu Pro Ile Ala Lys Trp Gln Asp Val Gly Pro Asp His Phe Asn Ile
85 90 95

Leu Asp Ala Phe Tyr Ala Glu Pro Gln Arg Tyr Ala Tyr Thr Phe Gln
100 105 110

Asn Tyr Val Phe Val Thr Arg Val Met Gln Glu Lys Glu Ser Ser Ser
115 120 125

Gly Ile Lys Pro Leu Arg Leu Met Glu Arg Ser Val Phe Ser Asp Arg
130 135 140

Met Val Val Lys Phe Leu Lys Val Phe Val Arg Ala Val His Glu Ala
145 150 155 160

Asn Trp Met Asn Glu Met Glu Ile Ser Ile Tyr Asp Ser Trp Phe Asp
165 170 175

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Pro Val Val Ser Ser Leu Pro Gly Leu Ile Pro Asp Gly Phe Ile Tyr
180 185 190

Leu Arg Ala Ser Pro Asp Thr Cys His Lys Arg Met Met Val Arg Lys
195 200 205

Arg Ser Glu Glu Gly Gly Val Thr Leu Asp Tyr Leu Arg Gly Leu His
210 215 220

Glu Lys His Glu Ser Trp Leu Leu Pro Ser Lys Gly Gln Gly Pro Gly
225 230 235 240

Val Leu Ser Val Ser Gln Val Pro Val His Met Glu Gly Ser Leu Pro
245 250 255

Pro Asp Ile Arg Glu Arg Val Phe Tyr Leu Glu Gly Asp His Met His
260 265 270

Ser Ser Ile Gln Lys Val Pro Ala Leu Val Leu Asp Cys Glu His Asp
275 280 285

Ile Asp Phe Asn Lys Asp Ile Glu Ala Lys Arg Gln
290 295 300

<210> 8

<211> 260

<212> PRT

<213> Homo sapiens

<400> 8

Met Ala Thr Pro Pro Lys Arg Ser Cys Pro Ser Phe Ser Ala Ser Ser
1 5 10 15

Glu Gly Thr Arg Ile Lys Lys Ile Ser Ile Glu Gly Asn Ile Ala Ala
20 25 30

Gly Lys Ser Thr Phe Val Asn Ile Leu Lys Gln Leu Cys Glu Asp Trp
35 40 45

Glu Val Val Pro Glu Pro Val Ala Arg Trp Cys Asn Val Gln Ser Thr
50 55 60

Gln Asp Glu Phe Glu Glu Leu Thr Met Ser Gln Lys Asn Gly Gly Asn
65 70 75 80

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Val Leu Gln Met Met Tyr Glu Lys Pro Glu Arg Trp Ser Phe Thr Phe
85 90 95

Gln Thr Tyr Ala Cys Leu Ser Arg Ile Arg Ala Gln Leu Ala Ser Leu
100 105 110

Asn Gly Lys Leu Lys Asp Ala Glu Lys Pro Val Leu Phe Phe Glu Arg
115 120 125

Ser Val Tyr Ser Asp Arg Tyr Ile Phe Ala Ser Asn Leu Tyr Glu Ser
130 135 140

Glu Cys Met Asn Glu Thr Glu Trp Thr Ile Tyr Gln Asp Trp His Asp
145 150 155 160

Trp Met Asn Asn Gln Phe Gly Gln Ser Leu Glu Leu Asp Gly Ile Ile
165 170 175

Tyr Leu Gln Ala Thr Pro Glu Thr Cys Leu His Arg Ile Tyr Leu Arg
180 185 190

Gly Arg Asn Glu Glu Gln Gly Ile Pro Leu Glu Tyr Leu Glu Lys Leu
195 200 205

His Tyr Lys His Glu Ser Trp Leu Leu His Arg Thr Leu Lys Thr Asn
210 215 220

Phe Asp Tyr Leu Gln Glu Val Pro Ile Leu Thr Leu Asp Val Asn Glu
225 230 235 240

Asp Phe Lys Asp Lys Tyr Glu Ser Leu Val Glu Lys Val Lys Glu Phe
245 250 255

Leu Ser Thr Leu
260

<210> 9

<211> 277

<212> PRT

<213> Homo sapiens

<400> 9

Met Ala Ala Gly Arg Leu Phe Leu Ser Arg Leu Arg Ala Pro Phe Ser
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1 5 10 15
 Ser Met Ala Lys Ser Pro Leu Glu Gly Val Ser Ser Ser Arg Gly Leu
 20 25 30
 His Ala Gly Arg Gly Pro Arg Arg Leu Ser Ile Glu Gly Asn Ile Ala
 35 40 45
 Val Gly Lys Ser Thr Phe Val Lys Leu Leu Thr Lys Thr Tyr Pro Glu
 50 55 60
 Trp His Val Ala Thr Glu Pro Val Ala Thr Trp Gln Asn Ile Gln Ala
 65 70 75 80
 Ala Gly Asn Gln Lys Ala Cys Thr Ala Gln Ser Leu Gly Asn Leu Leu
 85 90 95
 Asp Met Met Tyr Arg Glu Pro Ala Arg Trp Ser Tyr Thr Phe Gln Thr
 100 105 110
 Phe Ser Phe Leu Ser Arg Leu Lys Val Gln Leu Glu Pro Phe Pro Glu
 115 120 125
 Lys Leu Leu Gln Ala Arg Lys Pro Val Gln Ile Phe Glu Arg Ser Val
 130 135 140
 Tyr Ser Asp Arg Tyr Ile Phe Ala Lys Asn Leu Phe Glu Asn Gly Ser
 145 150 155 160
 Leu Ser Asp Ile Glu Trp His Ile Tyr Gln Asp Trp His Ser Phe Leu
 165 170 175
 Leu Trp Glu Phe Ala Ser Arg Ile Thr Leu His Gly Phe Ile Tyr Leu
 180 185 190
 Gln Ala Ser Pro Gln Val Cys Leu Lys Arg Leu Tyr Gln Arg Ala Arg
 195 200 205
 Glu Glu Glu Lys Gly Ile Glu Leu Ala Tyr Leu Glu Gln Leu His Gly
 210 215 220
 Gln His Glu Ala Trp Leu Ile His Lys Thr Thr Lys Leu His Phe Glu
 225 230 235 240
 Ala Leu Met Asn Ile Pro Val Leu Val Leu Asp Val Asn Asp Asp Phe
 245 250 255

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Ser Glu Glu Val Thr Lys Gln Glu Asp Leu Met Arg Glu Val Asn Thr
260 265 270

Phe Val Lys Asn Leu
275

<210> 10

<211> 234

<212> PRT

<213> Homo sapiens

<400> 10

Met Gly Ala Phe Cys Gln Arg Pro Ser Ser Asp Lys Glu Gln Glu Lys
1 5 10 15

Glu Lys Lys Ser Val Ile Cys Val Glu Gly Asn Ile Ala Gly Gly Lys
20 25 30

Thr Thr Cys Leu Glu Phe Phe Ser Asn Ala Thr Asp Val Glu Val Leu
35 40 45

Thr Glu Pro Val Ser Lys Trp Arg Asn Val Arg Gly His Asn Pro Leu
50 55 60

Gly Leu Met Tyr His Asp Ala Ser Arg Trp Gly Leu Thr Leu Gln Thr
65 70 75 80

Tyr Val Gln Leu Thr Met Leu Asp Arg His Thr Arg Pro Gln Val Ser
85 90 95

Ser Val Arg Leu Met Glu Arg Ser Ile His Ser Ala Arg Tyr Ile Phe
100 105 110

Val Glu Asn Leu Tyr Arg Ser Gly Lys Met Pro Glu Val Asp Tyr Val
115 120 125

Val Leu Ser Glu Trp Phe Asp Trp Ile Leu Arg Asn Met Asp Val Ser
130 135 140

Val Asp Leu Ile Val Tyr Leu Arg Thr Asn Pro Glu Thr Cys Tyr Gln
145 150 155 160

Arg Leu Lys Lys Arg Cys Arg Glu Glu Glu Lys Val Ile Pro Leu Glu
165 170 175

520-sequences.ST25

Tyr Leu Glu Ala Ile His His Leu His Glu Glu Trp Leu Ile Lys Gly
180 185 190

Ser Leu Phe Pro Met Ala Ala Pro Val Leu Val Ile Glu Ala Asp His
195 200 205

His Met Glu Arg Met Leu Glu Leu Phe Glu Gln Asn Arg Asp Arg Ile
210 215 220

Leu Thr Pro Glu Asn Arg Lys His Cys Pro
225 230

<210> 11

<211> 234

<212> PRT

<213> Homo sapiens

<400> 11

Met Ser Cys Ile Asn Leu Pro Thr Val Leu Pro Gly Ser Pro Ser Lys
1 5 10 15

Thr Arg Gly Gln Ile Gln Val Ile Leu Gly Pro Met Phe Ser Gly Lys
20 25 30

Ser Thr Glu Leu Met Arg Arg Val Arg Arg Phe Gln Ile Ala Gln Tyr
35 40 45

Lys Cys Leu Val Ile Lys Tyr Ala Lys Asp Thr Arg Tyr Ser Ser Ser
50 55 60

Phe Cys Thr His Asp Arg Asn Thr Met Glu Ala Leu Pro Ala Cys Leu
65 70 75 80

Leu Arg Asp Val Ala Gln Glu Ala Leu Gly Val Ala Val Ile Gly Ile
85 90 95

Asp Glu Gly Gln Phe Phe Pro Asp Ile Met Glu Phe Cys Glu Ala Met
100 105 110

Ala Asn Ala Gly Lys Thr Val Ile Val Ala Ala Leu Asp Gly Thr Phe
115 120 125

Gln Arg Lys Pro Phe Gly Ala Ile Leu Asn Leu Val Pro Leu Ala Glu
130 135 140

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Ser Val Val Lys Leu Thr Ala Val Cys Met Glu Cys Phe Arg Glu Ala
145 150 155 160

Ala Tyr Thr Lys Arg Leu Gly Thr Glu Lys Glu Val Glu Val Ile Gly
165 170 175

Gly Ala Asp Lys Tyr His Ser Val Cys Arg Leu Cys Tyr Phe Lys Lys
180 185 190

Ala Ser Gly Gln Pro Ala Gly Pro Asp Asn Lys Glu Asn Cys Pro Val
195 200 205

Pro Gly Lys Pro Gly Glu Ala Val Ala Ala Arg Lys Leu Phe Ala Pro
210 215 220

Gln Gln Ile Leu Gln Cys Ser Pro Ala Asn
225 230

<210> 12

<211> 248

<212> PRT

<213> Bombyx mori

<400> 12

Met Ser Ala Asn Asn Val Lys Pro Phe Thr Val Phe Val Glu Gly Asn
1 5 10 15

Ile Gly Ser Gly Lys Thr Thr Phe Leu Glu His Phe Arg Gln Phe Glu
20 25 30

Asp Ile Thr Leu Leu Thr Glu Pro Val Glu Met Trp Arg Asp Leu Lys
35 40 45

Gly Cys Asn Leu Leu Glu Leu Met Tyr Lys Asp Pro Glu Lys Trp Ala
50 55 60

Met Thr Phe Gln Ser Tyr Val Ser Leu Thr Met Leu Asp Met His Arg
65 70 75 80

Arg Pro Ala Pro Thr Pro Val Lys Leu Met Glu Arg Ser Leu Phe Ser
85 90 95

Ala Arg Tyr Cys Phe Val Glu His Ile Met Arg Asn Asn Thr Leu His
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100	105	110
Pro Ala Gln Phe Ala Val Leu Asp Glu Trp Phe Arg Phe Ile Gln His	115	120 125
Asn Ile Pro Ile Asp Ala Asp Leu Ile Val Tyr Leu Lys Thr Ser Pro	130	135 140
Ser Ile Val Tyr Gln Arg Ile Lys Lys Arg Ala Arg Ser Glu Glu Gln	145	150 155 160 165
Cys Val Pro Leu Ser Tyr Ile Glu Glu Leu His Arg Leu His Glu Asp	165	170 175
Trp Leu Ile Asn Arg Ile His Ala Glu Cys Pro Ala Pro Val Leu Val	180	185 190
Leu Asp Ala Asp Leu Asp Leu Ser Gln Ile Thr Asp Glu Tyr Lys Arg	195	200 205
Ser Glu His Gln Ile Leu Arg Lys Ala Val Asn Val Val Met Ser Ser	210	215 220
Pro Asn Lys His Ser Pro Lys Lys Pro Ile Ser Thr Thr Pro Ile Lys	225	230 235 240
Ile Thr Pro His Met Arg Ile Leu	245	

<210> 13

<211> 246

<212> PRT

<213> Anopheles gambiae

<400> 13

Met Pro Pro Ile Ala Ser Glu Lys Leu Gly Ala Ser Gly Lys Lys Pro	1	5	10	15
Phe Thr Val Phe Val Glu Gly Asn Ile Gly Ser Gly Lys Thr Thr Phe	20	25	30	
Leu Asn His Phe Gln Lys Phe Asn Asp Ile Cys Leu Leu Thr Glu Pro	35	40	45	

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Val Glu Lys Trp Arg Asn Cys Gly Gly Val Asn Leu Leu Asp Leu Met
50 55 60

Tyr Lys Glu Ser His Arg Trp Ala Met Pro Phe Gln Thr Tyr Val Thr
65 70 75 80

Leu Thr Met Leu Asp Met His Thr Cys Gln Thr Asp Lys Ser Val Lys
85 90 95

Leu Met Glu Arg Ser Leu Phe Ser Ala Arg Asn Cys Phe Val Glu Ser
100 105 110

Met Leu Ala Ser Gly Ser Leu His Gln Gly Met Tyr Asn Val Leu Gln
115 120 125

Glu Trp Tyr Asp Phe Ile Cys Cys Asn Ile His Ile Gln Ala Asp Leu
130 135 140

Ile Val Tyr Leu Gln Thr Ser Pro Glu Val Val Tyr Glu Arg Met Lys
145 150 155 160

Gln Arg Ala Arg Ser Glu Glu Ser Cys Val Pro Leu Glu Tyr Leu Lys
165 170 175

Glu Leu His Glu Leu His Glu Asn Trp Leu Ile His Gly Ala Ser Pro
180 185 190

Arg Pro Ala Pro Val Leu Val Leu Asn Ala Asp Leu Asp Leu Asn Thr
195 200 205

Ile Gly Ala Glu Tyr Glu Arg Ser Glu Thr Ser Ile Leu Lys Pro Ile
210 215 220

Leu Ile Glu Asn Thr Asn Gln His Ala Ile Leu Thr Ser Pro Ala Lys
225 230 235 240

Arg Ala Lys Thr Asp Phe
245

<210> 14

<211> 276

<212> PRT

<213> Oryza sativa

<400> 14

520-sequences.ST25

Met Ser Ser Ile Cys Ala Met Arg Ser Leu Leu Ala Ala Ser Thr Phe
1 5 10 15

Leu Arg Ser Gly Ala Ser Pro Leu Leu Arg Pro Leu Ser Arg Pro Leu
20 25 30

Pro Ser Arg Leu Asn Leu Ser Arg Phe Gly Pro Val Arg Pro Val Ser
35 40 45

Ala Ala Ala Ala Ala Ala Asp Lys Ser Arg Gly Gly Gly Gly Ser Ala
50 55 60

Met Glu Ala Gln Pro Ser Tyr Pro Gly Glu Ile His Val Ile Val Gly
65 70 75 80

Pro Met Phe Ala Gly Lys Thr Thr Ala Leu Leu Arg Arg Val Gln Val
85 90 95

Glu Ala Gly Thr Gly Arg Asn Val Ala Leu Ile Lys Ser Asp Lys Asp
100 105 110

Asn Arg Tyr Gly Leu Asp Ser Val Val Thr His Asp Gly Thr Lys Met
115 120 125

Pro Cys Trp Ala Leu Pro Glu Leu Ser Ser Phe Gln Asp Lys Leu Gly
130 135 140

Thr Glu Ala Tyr Asp Lys Val Asp Val Ile Gly Ile Asp Glu Ala Gln
145 150 155 160

Phe Phe Asp Asp Leu His Asp Phe Cys Cys Lys Ala Ala Asp Arg Asp
165 170 175

Gly Lys Ile Val Val Val Ala Gly Leu Asp Gly Asp Tyr Lys Arg Asn
180 185 190

Lys Phe Gly Ser Val Leu Asp Ile Ile Pro Leu Ala Asp Ser Val Thr
195 200 205

Lys Leu Thr Ala Arg Cys Glu Leu Cys Gly Arg Arg Ala Phe Phe Thr
210 215 220

Leu Arg Lys Thr Arg Glu Thr Lys Thr Glu Leu Ile Gly Gly Ala Asp
225 230 235 240

Val Tyr Met Pro Val Cys Arg Gln His Tyr Leu Asp Gly Gln Ile Val
245 250 255

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Ile Glu Ala Thr Arg Ile Val Leu Asp Leu Glu Lys Ser Lys Val Ile
260 265 270

His Ala Phe Lys
275

<210> 15

<211> 238

<212> PRT

<213> Arabidopsis thaliana

<400> 15

Met Ala Thr Leu Lys Ala Ser Phe Leu Ile Lys Thr Leu Asp Ser Asp
1 5 10 15

Val Thr Gly Asp Phe Leu Ser Asp Leu Glu Arg Arg Gly Ser Gly Ala
20 25 30

Val His Val Ile Met Gly Pro Met Phe Ser Gly Lys Ser Thr Ser Leu
35 40 45

Leu Arg Arg Ile Lys Ser Glu Ile Ser Asp Gly Arg Ser Val Ala Met
50 55 60

Leu Lys Ser Ser Lys Asp Thr Arg Tyr Ala Lys Asp Ser Val Val Thr
65 70 75 80

His Asp Gly Ile Gly Phe Pro Cys Trp Ala Leu Pro Asp Leu Met Ser
85 90 95

Phe Pro Glu Lys Phe Gly Leu Asp Ala Tyr Asn Lys Leu Asp Val Ile
100 105 110

Gly Ile Asp Glu Ala Gln Phe Phe Gly Asp Leu Tyr Glu Phe Cys Cys
115 120 125

Lys Val Ala Asp Asp Asp Gly Lys Ile Val Ile Val Ala Gly Leu Asp
130 135 140

Gly Asp Tyr Leu Arg Arg Ser Phe Gly Ala Val Leu Asp Ile Ile Pro
145 150 155 160

Ile Ala Asp Ser Val Thr Lys Leu Thr Ala Arg Cys Glu Val Cys Gly
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165

170

175

His Lys Ala Phe Phe Thr Leu Arg Lys Asn Cys Asp Thr Arg Thr Glu
180 185 190

Leu Ile Gly Gly Ala Asp Val Tyr Met Pro Val Cys Arg Lys His Tyr
195 200 205

Ile Thr Asn His Ile Val Ile Lys Ala Ser Lys Lys Val Leu Glu Asp
210 215 220

Ser Asp Lys Ala Arg Ala Glu Ser Cys Val Ala Ala Thr Ile
225 230 235

<210> 16

<211> 277

<212> PRT

<213> Arabidopsis thaliana

<400> 16

Met Arg Thr Leu Ile Ser Pro Ser Leu Ala Pro Phe Ser Leu His Leu
1 5 10 15

His Lys Pro Ser Leu Phe Ser Thr Ala Leu Arg Phe Ser Phe Ser Ile
20 25 30

Asn Asn Ile Thr Pro Thr Asn Ser Pro Pro Ser Thr Ile Ser Thr Arg
35 40 45

Lys Leu Gln Thr Lys Ala Thr Arg Val Thr Ser Ser Ser Ser Gln
50 55 60

Pro Leu Ser Ser Ser Ser Pro Gly Glu Ile His Val Val Val Gly Pro
65 70 75 80

Met Phe Ser Gly Lys Thr Thr Thr Leu Leu Arg Arg Ile Leu Ala Glu
85 90 95

Arg Glu Thr Gly Lys Arg Ile Ala Ile Ile Lys Ser Asn Lys Asp Thr
100 105 110

Arg Tyr Cys Thr Glu Ser Ile Val Thr His Asp Gly Glu Lys Tyr Pro
115 120 125

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Cys Trp Ser Leu Pro Asp Leu Ser Ser Phe Lys Glu Arg Phe Gly Phe
130 135 140

Asp Asp Tyr Glu Asn Arg Leu Asp Val Ile Gly Ile Asp Glu Ala Gln
145 150 155 160

Phe Phe Gly Asp Leu Tyr Glu Phe Cys Arg Glu Ala Ala Asp Lys Glu
165 170 175

Gly Lys Thr Val Ile Val Ala Gly Leu Asp Gly Asp Phe Met Arg Arg
180 185 190

Arg Phe Gly Ser Val Leu Asp Leu Ile Pro Ile Ala Asp Thr Val Thr
195 200 205

Lys Leu Thr Ser Arg Cys Glu Val Cys Gly Lys Arg Ala Leu Phe Thr
210 215 220

Met Arg Lys Thr Glu Glu Lys Glu Thr Glu Leu Ile Gly Gly Ala Glu
225 230 235 240

Val Tyr Met Pro Val Cys Arg Ser His Tyr Val Cys Gly Gln Asn Val
245 250 255

Leu Glu Thr Ala Arg Ala Val Leu Asp Ser Ser Asn Asn His Ser Val
260 265 270

Val Ala Ser Ser Leu
275

<210> 17

<211> 365

<212> PRT

<213> Lycopersicon esculentum

<400> 17

Met Val Glu Phe Leu Gln Ser Ser Ile Gly Ile Ile His Arg Asn His
1 5 10 15

Ala Glu Ser Ile Thr Thr Tyr Ile Arg Lys Ser Val Asp Glu Glu Leu
20 25 30

Lys Glu Asn Asn Ser Asp Ser Asn Val Lys Ser Thr Gln Lys Lys Arg
35 40 45

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Leu Thr Phe Cys Val Glu Gly Asn Ile Ser Val Gly Lys Thr Thr Phe
 50 55 60
 Leu Gln Arg Ile Ala Asn Glu Thr Leu Glu Leu Gln Asp Leu Val Glu
 65 70 75 80
 Ile Val Pro Glu Pro Ile Ala Lys Trp Gln Asp Ile Gly Pro Asp His
 85 90 95
 Phe Asn Ile Leu Asp Ala Phe Tyr Ala Glu Pro Gln Arg Tyr Ala Tyr
 100 105 110
 Thr Phe Gln Asn Tyr Val Phe Val Thr Arg Val Met Gln Glu Arg Glu
 115 120 125
 Ser Ser Gly Gly Ile Arg Pro Leu Arg Leu Met Glu Arg Ser Val Phe
 130 135 140
 Ser Asp Arg Met Val Phe Val Arg Ala Val His Glu Ala Asn Trp Met
 145 150 155 160
 Asn Glu Met Glu Ile Ser Ile Tyr Asp Ser Trp Phe Asp Pro Val Val
 165 170 175
 Ser Thr Leu Pro Gly Leu Ile Pro Asp Gly Phe Ile Tyr Leu Arg Ala
 180 185 190
 Ser Pro Asp Thr Cys His Lys Arg Met Met Leu Arg Lys Arg Thr Glu
 195 200 205
 Glu Gly Gly Val Ser Leu Glu Tyr Leu Arg Gly Leu His Glu Lys His
 210 215 220
 Glu Ser Trp Leu Phe Pro Phe Glu Ser Gly Asn His Gly Val Leu Ser
 225 230 235 240
 Val Ser Glu Leu Pro Leu Asn Phe Asp Lys Phe Cys Val Pro Pro Glu
 245 250 255
 Ile Arg Asp Arg Val Phe Tyr Leu Glu Gly Asn His Met His Pro Ser
 260 265 270
 Ile Gln Lys Val Pro Ala Leu Val Leu Asp Cys Glu Pro Asn Ile Asp
 275 280 285
 Phe Asn Arg Asp Ile Glu Ala Lys Arg Gln Tyr Ala Arg Gln Val Ala
 290 295 300

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Asp Phe Phe Glu Phe Val Lys Lys Lys Gln Glu Val Met Pro Gly Ala
 305 310 315 320

Gly Glu Glu Gln Pro Lys Gly Asn Gln Ala Pro Val Met Leu Pro Gln
 325 330 335

Asn Gly Gly Leu Trp Val Pro Gly Gly Lys Phe Ser Glu Ser Thr Leu
 340 345 350

Asn Leu Asp Phe Arg Arg Asn Met Ser Phe Met Ser His
 355 360 365